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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,322	09/30/2003	Christopher van Es	5231-094-US01	2243

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EXAMINER	
DULANEY, KATHLEEN YUAN	
ART UNIT	PAPER NUMBER
2624	

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11/14/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/673,322	ES, CHRISTOPHER VAN	
	Examiner	Art Unit	
	KATHLEEN Y. DULANEY	2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1,2 and 5-18* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,2 and 5-18* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☒ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

The response received on 10/27/2011 has been placed in the file and was considered by the examiner. An action on the merit follows.

Response to Amendment

1. The amendments filed on 27 October 2011 have been fully considered. Response to these amendments is provided below.

Summary of Amendment/ Arguments and Examiner's Response:

2. The applicant has amended the claims to specify that the information is identifying a user being authenticated, and that the information is identity information, and argues that prior art does not teach the claimed limitations.

3. Applicant's arguments with respect to the claims have been considered but are moot because the arguments of the new combination of references being used in the current rejection.

4. It is noted that claim 14 does not have correct markings for the current amendments. Claim 14 adds several words without indication. The examiner is interpreting the claim as read.

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

(a) TITLE OF THE INVENTION.
(b) CROSS-REFERENCE TO RELATED APPLICATIONS.
(c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
(d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
(e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
(f) BACKGROUND OF THE INVENTION.
(1) Field of the Invention.
(2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
(g) BRIEF SUMMARY OF THE INVENTION.
(h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
(i) DETAILED DESCRIPTION OF THE INVENTION.
(j) CLAIM OR CLAIMS (commencing on a separate sheet).
(k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
(l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1, 2, 6, 7, 11, 12, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable by U.S. Patent 6944773 (Abrahams) in view of U.S. Patent No. 6040783 (Houvener et al).

7. Regarding claim 7, Abrahams discloses an apparatus for authenticating a user (fig. 1), the apparatus comprising a fingerprint sensor operable to sensing only one fingerprint at a time (fig. 1, items 122, 126, 130), a database (fig. 1, item 106) and a processor (fig. 1, item 104, 108, 110, 112) adapted to perform the steps of: a. extracting the database file for a user being authenticated (col. 5, lines 14-15) b) obtaining from a biometric contact sensor (col. 3, lines 30-35) a data set of biometric contact characteristics for each of a plurality of body parts, the images obtained being the data set, for each of the plurality of body parts (fig. 5, step 356); c. comparing each data set with authentic versions, corresponding fingerprints on file, (fig. 5, step 362) stored in a database (fig. 1 item 106) to determine whether each data set of biometric contact characteristics belongs to the user (fig. 5, step 362); d. determining whether each of the plurality of parts of the user's body are placed on the biometric contact sensor at a sensing position within a predetermined period of time of one another, by finding if each successive fingerprint is placed within the time-out period (col. 6, lines 4-14) when it is determined that each data set of biometric contact characteristics belongs to the user, during authentication procedure of fig. 5; e. determining whether the plurality of parts of the user's body were placed on the biometric contact sensor at the sensing position in a sequence when it is determined that the plurality of parts of the user's body are placed within the predetermined

period of time of one another (col. 6, lines 4-14), since it is determined that the parts were placed in a sequence because if the parts weren't, then it is determined that they are not placed in a full sequence by timing out (col. 6, lines 4-14), and if they were, the parts are determined to be entered in the sequence by continuing to the comparison of fig. 5, step 362. Abrahams further discloses the sequence randomly changes after each authentication of the identity of the user, since the fingerprint is chosen by random at each authentication (fig. 5, step 354); and f. issuing an authentication signal when it is determined that the plurality of parts of the user's body are placed on the biometric contact sensor at the sensing position in the sequence (fig. 5, step 366).

Abrahams does not disclose expressly receiving information identifying a user being authenticated is how the database file for a user being authenticated is extracted (and thereby, the user's identity information/ information was received.

Houvener et al discloses receiving information identifying a user being authenticated (fig. 8, "operator inputs unique identifier for person to be ID'ed") in order to extract the database file for the user to be authenticated (fig. 8, "biometric or other ID data is retrieved and sent to mid unit), where the ID is verified at the mid unit.

Abrahams and Houvener et al are because they are from the same field of endeavor, i.e. authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to received information identifying a user being authenticated to retrieve the database file for the user.

The suggestion/ motivation for doing so would have been to provide a more robust, fast system by provided a direct means of comparison to retrieve to correct database file.

8. Therefore, it would have been obvious to combine the method of Abrahams with the identifying data of Houvener et al to obtain the invention as specified in claim 7.

9. Claims 1 and 18 are rejected for the same reasons as claim 7. Thus, the arguments analogous to that presented above for claim 7 are equally applicable to claims 1 and 18. Claims 1 and 18 distinguishes from claim 7 only in that claim 1 is a method claim, claim 18 is a computer product claim with a computer readable medium and claim 7 is an apparatus. Since an apparatus carries out a method, and since Abrahams discloses a computer program products comprising a non-transitory computer readable medium and computer program instruction (fig. 1) performing the method, prior art applies.

10. Regarding claim 2, Abrahams discloses the body parts are the user's fingertips, since fingerprints are obtained from fingertips (fig. 5, step 354) and the biometric contact sensor is a fingerprint sensor (col. 3, lines 30-35).

11. Regarding claim 6, Abrahams discloses that the data sets are compared with the authentic versions using a correlation based algorithm since the fingerprints are correlated in the algorithm carried out in fig. 4, step 362.

12. Regarding claim 11, Abrahams discloses the apparatus further comprises a data input device (fig. 1, keyboards or any other input device shown in fig. 1). Houvener also discloses a data input device (fig. 1, item 5).

13. Regarding claim 12, Houvener et al discloses the data input device is a keypad (fig. 1, item 5).

14. Regarding claim 14, Abrahams discloses a method (fig. 5) of authenticating the identity of a user, the method comprising: a. extracting a database file for a user to be authenticated (col. 5, line15-16); b.) obtaining a sequence of data sets/ images of biometric characteristics/ fingerprints of the user, the sequence provided in the process loop of fig. 5, steps 352-360 each data set relating to one of a plurality of parts of the user's body, a finger (fig. 5, step 354); c. comparing each data setoff biometric contact characteristics with authentic versions stored in a database to determine whether each data set of biometric contact characteristics belongs to the user (fig. 5, step 362), wherein the user provided identifying information, i.e. fingerprints (fig. 5, s356), the authentication information (fig. 5, item 366, or any of the identifying data that is registered in fig. 2; d. monitoring the order in which the sequence of data sets was obtained by monitoring the amount of inputs and monitoring the user's input of the fingerprint (fig. 5, step 352 and 354); e. determining whether the data sets are obtained within a predetermined period of time of one another by determining that each data set input is obtained within a time-out period (col. 6, lines 5-10) when it is determined that each data set of biometric contact characteristics belongs to the user for which identifying information was provided since, the

whole process of fig. 5, is carried out during authentication; f. determining whether the sequence of data sets are in a specified order when it is determined that the data sets are obtained within the predetermined period of time of one another by determining that the inputs have been entered before time-out and thus the specified order has been input by the user (col. 6, lines 5-10), wherein the specified order changes after each authentication of the identity of the user since the fingerprints are chosen at random each time the authentication occurs (fig. 5, step 354); and g. issuing an authentication signal when it is determined that the sequence of the data sets are in the specified order (fig. 5, step 355, 364).

Houvener et al discloses receiving information identifying a user being authenticated (fig. 8, "operator inputs unique identifier for person to be ID'ed") in order to extract the database file for the user to be authenticated (fig. 8, "biometric or other ID data is retrieved and sent to mid unit), where the ID is verified at the mid unit. Furthermore, this information can be interpreted as "identifying information" of above.

15. Regarding claim 15, Abrahams discloses at least one of the plurality of parts of the user's body is a fingertip, since fingerprints come from fingertips (fig. 5, step 354).

16. Claims 5, 8, 9 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view Houvener et al, as applied to claims 1, 7, 14 and 18 above, and further in view of U.S. Patent No 6393139 (Lin et al).

17. Regarding claim 5, Abrahams (as modified by Houvener et al) discloses all of the claimed elements as set forth above and incorporated herein by reference. Abrahams does not disclose expressly that the data sets are compared with the authentic versions using a minutiae based algorithm.

Lin et al discloses data sets are compared with the authentic versions using a minutiae based algorithm (col. 6, line 23).

Abrahams (as modified by Houvener et al) and Lin et al are combinable because they are from the same field of endeavor, i.e. fingerprint authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a minutiae based algorithm.

The suggestion/motivation for doing so would have been to provide a simple, well known and easy way to match fingerprints, and thus create a more robust method.

Therefore, it would have been obvious to combine the method of Abrahams (as modified by Houvener et al) with the minutia matching of Lin et al to obtain the invention as specified in claim 5.

18. Regarding claim 8, Lin et al discloses that many fingerprint sensors are capacitive sensors (col. 1, lines 35-43).

19. Regarding claim 9, Lin et al discloses that many fingerprint sensors are optical sensors (col. 1, line 19).

20. Regarding claim 17, Lin et al discloses in a multiple input device, at least one of the plurality of parts of the user's body is the user's face (col. 5, lines 28-31).

21. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view Houvener et al, as applied to claims 1, 7, 14 and 18 above, and further in view of U.S. Patent No. 5864296 (Upton).

Abrahams (as modified by Houvener et al) discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams (as modified by Houvener et al) does not disclose expressly the fingerprint sensor is a thermal sensor.

Upton discloses that many fingerprint sensors are thermal (col. 1, lines 35-36).

Abrahams (as modified by Houvener et al) and Upton are combinable because they are from the same field of endeavor, i.e. fingerprint recognition.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a thermal sensor.

The suggestion/motivation for doing so would have been to provide a more flexible system by providing a different ways of sensing the fingerprint, such as imaging fingerprints in the dark.

Therefore, it would have been obvious to combine the apparatus of Abrahams (as modified by Houvener et al) with the thermal sensor of Upton to obtain the invention as specified in claim 10.

22. Claims 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahams in view of U.S. Patent Application Publication No. 20030026462 (Chung et al).

Regarding claim 13, Abrahams discloses all of the claimed elements as set forth above and incorporated herein by reference.

Abrahams does not disclose expressly that one a data input device is a smart card reader.

Regarding claim 13, Chung et al discloses that the data input device is a smart card reader (page 7, paragraph 70).

Abrahams and Chung et al are combinable because they are from the same field of endeavor, i.e. authentication.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to have a smart card reader.

The suggestion/motivation for doing so would have been to provide a more flexible, robust apparatus by allowing several different functionalities/ inputs of the apparatus, and to allow a faster system by storing information on a smart card instead of the system.

Therefore, it would have been obvious to combine the apparatus of Abrahams with the smart card reader of Chung et al to obtain the invention as specified in claim 13.

23. Regarding claim 16, Chung et al discloses that one of the parts of the body that can be used as a biometric characteristic in a multiple input arrangement is the retina (page 3, paragraph 33.)

Conclusion

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KATHLEEN Y. DULANEY whose telephone number is (571)272-2902. The examiner can normally be reached on Monday to Thursdays, 9 AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on (571)272-7453. The

fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/KATHLEEN Y DULANEY/
Primary Examiner, Art Unit 2624
11/8/2011